REMARKS

Initially, Applicants would like to express appreciation to the Examiner for the detailed Official Action provided.

However, Applicants note that the Examiner has not acknowledged Applicants' **Claim for Priority** and receipt of the certified copy of the priority document. It is noted that the Patent Application Information Retrieval (PAIR) system on the U.S. Patent and Trademark Office website reflects Applicants' Claim for Priority in the instant application. Accordingly, the Examiner is requested to acknowledge receipt of Applicants' Claim for Priority and receipt of the certified copy of the priority document in the next Official Action.

Upon entry of the above amendment, claim 1 will have been amended. Accordingly, claims 1-4 are currently pending. Applicants respectfully request reconsideration of the outstanding rejection and allowance of claims 1-4 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

The Examiner has rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over INOUE et al. (U.S. Patent Appl. Pub. No. 2003/0157404) in view of KAGEYAMA (U.S. Patent Appl. Pub. No. 2001/0006746) and ENDO (JP 2001-155698).

Although Applicants do not necessarily agree with the Examiner's rejection of claim 1 on this ground, nevertheless, Applicants have amended independent claim 1 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicants note that INOUE et al., KAGEYAMA, and ENDO fail to teach or suggest the subject matter claimed in amended claim 1. In particular, claim 1, as amended, sets forth a generally oval battery including, inter alia, "a battery case having a generally oval cross section, a generally oval

sealing plate including a pair of linear parts opposite each other and a pair of circular parts opposite each other forming a generally oval shape and forming locations where the linear parts join the circular parts and the shape of the sealing plate changes from a circular part to a linear part and from a linear part to a circular part, and an electrode plate assembly, said sealing plate having a U-shaped cross section, and said battery having a thickness of 4mm or more and an aspect ratio of 3 or more, wherein the locations where the shape of the battery case changes from a circular part to a linear part or from a linear part to a circular part in an interface between said battery case and the sealing plate acts as a point where breakage occurs for discharge of gas".

This amendment is fully supported by the specification, including the claims and drawings, and no prohibited new matter has been added.

The explosion preventing battery of the present invention includes a discharge mechanism in which the weld between the sealing plate 3 and the battery case 2 will selectively break at a location where the shape of the battery case changes from the linear part 4 to the circular part 5 or where the shape of the battery case changes from the circular part 5 to the linear part 4. The selective breakage at the particular location controls gas discharge and prevents explosion.

In the present invention, when the internal pressure in the battery case rises, the battery 1 becomes deformed. The weld between the battery case 2 and the sealing plate 3 is made to break at a location where the shape of the battery case changes from the circular part to the linear part or from the linear part to the circular part, as shown in figure 3. Accordingly, Applicants' claimed invention provides a battery which easily discharges gas and prevents explosion in a controlled and predictable manner, without requiring expensive manufacturing equipment or many processing steps.

Due to the differences in the deformation of the circular part and the linear part, the weld will break at a location where the shape of the battery case changes from the circular part to the linear part or from the linear part to the circular part. Accordingly, the breakage of the weld in Applicant's battery is predictable and controllable, thus improving the performance of the battery and improving the explosion prevention feature of Applicants' invention.

The INOUE et al. publication teaches a battery having a generally oval sealing plate, but fails to teach or suggest a battery having a thickness of 4mm or more and an aspect ratio of 3 or more, and a breaking point at a location where the shape of the battery case changes from the circular part to the linear part or from the linear part to the circular part in an interface between the battery case and the sealing plate.

The KAGEYAMA publication teaches a flat, rectangular battery having a thickness of 4.5mm and a width of 34mm, but fails to teach or suggest a battery having a generally oval cross section; a generally oval sealing plate; and a breaking point at a location where the shape of the battery case changes from the circular part to the linear part or from the linear part to the circular part in an interface between the battery case and the sealing plate.

The ENDO publication is directed to a rectangular battery. ENDO fails to teach or suggest a generally oval battery, a battery case having a generally oval cross section, and a generally oval sealing plate. As clearly shown in figure 4, the battery has a rectangular shape. *The battery of ENDO does not have a "generally oval" shape as set forth in claim 1.* Further, as clearly shown in figure 4, the battery case has a rectangular cross section. *The battery case of ENDO does not have a "generally oval cross section" as set forth in claim 1.*

As shown in figure 4, the sealing plate 2 of the ENDO device is rectangular with two long sides of the rectangle, two shorter sides of the rectangle, and gently curved corners at the intersection points between the respective long sides and shorter sides, forming a rectangular shape. The sealing plate 2 is not oval shaped. The sealing plate of the ENDO device does not have a *"generally oval"* shape as set forth in claim 1; and the sealing plate of the ENDO device does not include *"a pair of linear parts opposite each other and a pair of circular parts opposite each other forming a generally oval shape"*, as set forth in amended claim 1. Furthermore, the sealing plate of ENDO also does not include a pair of linear parts opposite each other and a pair of circular parts opposite each other *"forming locations where the linear parts join the circular parts and the shape of the sealing plate changes from a circular part to a linear part and from a linear part to a circular part"*, as set forth in amended claim 1.

Furthermore, the Examiner indicates that reference numeral 5 in figure 4 indicates a location where the shape of the battery case changes from a circular part to a linear part or from a linear part to a circular part, that acts as a breakage point. However, Applicants respectfully submit that figure 4 clearly shows the indicated breakage point 5 completely on a linear portion of the sealing plate. In this regard, even the line A-A is completely on a linear portion of the sealing plate. However, even assuming, arguendo, that the gently curved corners of the ENDO sealing plate could be construed as circular parts, the ENDO device only includes a breakage point positioned on a linear portion adjacent a circular portion, and not at the point at which shape of the sealing plate changes. Thus, the sealing plate of ENDO still does not include *"the locations where the shape of the battery case changes from a circular part to a linear part or from a linear part to a circular part in an interface*

between said battery case and the sealing plate acts as a point where breakage occurs for discharge of gas", as set forth in amended claim 1.

Therefore, the ENDO publication fails to cure the deficiencies of the INOUE et al. and KAGEYAMA devices, and even assuming, arguendo, that the teachings of INOUE et al., KAGEYAMA, and ENDO have been properly combined, Applicants' claimed generally oval battery including, inter alia, "a battery case having a generally oval cross section, a generally oval sealing plate including a pair of linear parts opposite each other and a pair of circular parts opposite each other forming a generally oval shape and forming locations where the linear parts join the circular parts and the shape of the sealing plate changes from a circular part to a linear part and from a linear part to a circular part, and an electrode plate assembly, said sealing plate having a U-shaped cross section, and said battery having a thickness of 4mm or more and an aspect ratio of 3 or more, wherein the locations where the shape of the battery case changes from a circular part to a linear part or from a linear part to a circular part in an interface between said battery case and the sealing plate acts as a point where breakage occurs for discharge of gas" as set forth in amended claim 1 would not have resulted from the combined teachings thereof.

Moreover, there is nothing in the cited prior art that would lead one of ordinary skill in the art to make the modification suggested by the Examiner in the rejection of claim 1 under 35 U.S.C. § 103(a) over INOUE et al. in view of KAGEYAMA and ENDO. Thus, the only reason to combine the teachings of INOUE et al., KAGEYAMA and ENDO results from a review of Applicants' disclosure and the application of impermissible hindsight.

Accordingly, the rejection of claim 1 under 35 U.S.C. § 103(a) over INOUE in view of KAGEYAMA and ENDO is improper for all the above reasons and withdrawal thereof is respectfully requested.

Applicants submit that dependent claims 2-4, which are at least patentable due to their dependency from claim 1 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of claims 1-4.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is proper and that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicants' invention as recited in claims 1-4. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, consideration of the present amendment, reconsideration of the outstanding Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Any amendments to the claims which have been made in this amendment, which do not narrow the scope of the claims, and which have not been specifically noted to overcome a rejection

based upon the prior art, should be considered cosmetic in nature, and to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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